Nov. 19, 1940. F. W. NITARDY ET AL 2,222,042

PACKAGING TABLETS

Original Filed June 16, 1937

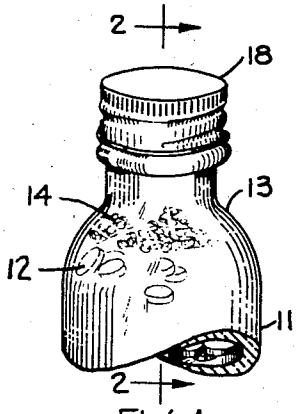


Fig. 1

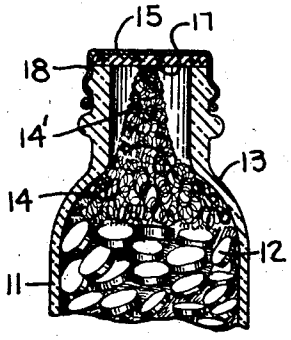


Fig. 2

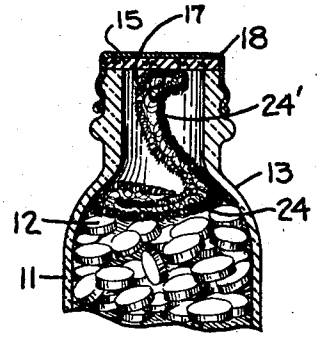


Fig. 3

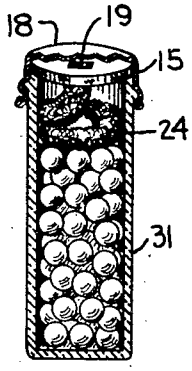


Fig. 4

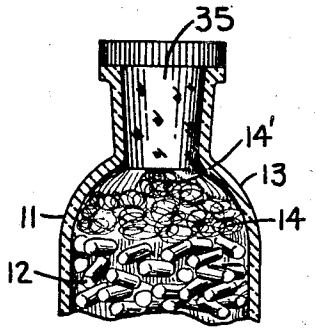


Fig. 5

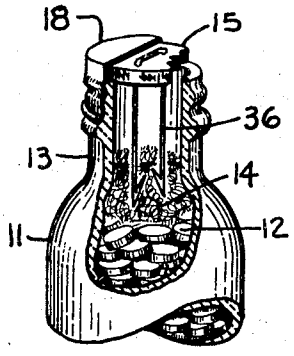


Fig. 6

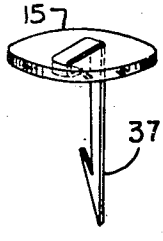


Fig. 7

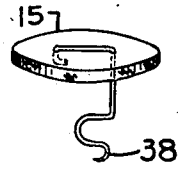
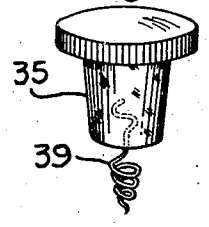


Fig. 8

Fig. 9



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PACKAGING TABLETS

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Continuation of application Serial No. 148,468, June 16, 1937. This application May 12, 1938, Serial No. 208,468

5 Claims. (Cl. 215—38)

This application is a continuation of application Ser. No. 148,468, filed June 16, 1937.

This invention relates to packages of, and methods of packaging, tablets. The term "tablets," as herein employed, means small concreted objects of any shape or kind.

Tablets are generally friable or frangible, and precautions are ordinarily taken in packaging them to prevent their being more or less reduced to fragments and powder by the impacts and movements involved in transporting and handling the package. Such precautions usually take the form of immobilizing the tablets within the package by insertion of a resilient packing between the uppermost layer of tablets and the shoulder, wall, and/or closure of the container. For example, pharmaceutical tablets are ordinarily packaged in small bottles and immobilized by means of cotton wadding. To obtain access to the tablets, the container closure is removed, and the resilient packing manually withdrawn. However, unless the packing happens to extend to the edge of the container mouth, which is unusual, the removal of the packing becomes a troublesome operation, often necessitating resort to a suitable implement, especially if the container mouth is narrow.

It is an object of this invention to provide a package of, and a method of packaging, tablets such that the packing can easily be removed.

In the practice of this invention, the packing is affixed to the closure, so that removal of the closure causes the simultaneous withdrawal of the packing. The affixation may be effected either before or after the packing is introduced into the container, and either by adhesion (e. g. gluing) or by a structural connection.

Several modifications of the invention are illustrated in the drawing, wherein:

Fig. 1 is a perspective view of a package embodying the invention.

Fig. 2 is a vertical sectional view of the package shown in Fig. 1, taken along the line 2—2 thereof.

Fig. 3 is a vertical sectional view of a modified package.

Fig. 4 is a vertical sectional view of still another modified package.

Fig. 5 is a vertical sectional view of a package having a cork closure.

Figs. 6 to 9, inclusive, are further modifications of the invention embodying structural connections between the closure and the packing.

Figs. 1 and 2 show a bottle 11 partially filled with tablets 12 and containing thereabove a suitable fibrous packing 14, which may be cotton wadding, shredded paper, or other material of similar characteristics. The lower surface of the packing is in contact with the uppermost layer of tablets, and upper surfaces of the packing are in contact with the walls and shoulder of the bottle; and the packing also extends up to the lower face of the unlined or lined screw-cap or of the liner 15 in the screw-cap 18, and is affixed thereto by a spot of glue 17.

This package may be assembled by the following procedure: The container is partially filled with tablets, and the packing material is introduced in such amount and position that an appreciable portion of its uppermost extremity extends a little above the plane to be occupied by the lower face of the closure. A spot of adhesive is placed in the center of the lower face of the closure, and the closure is then pushed or screwed into position.

Fig. 3 shows the packing material in the form of a strip of cotton wadding 24, which may be of circular or rectangular cross section. One end 24' of the wadding is glued at 17 to the under face of the unlined or lined screw-cap or of the cork liner 15 in the screw cap 18.

Fig. 4 shows a strip of cotton wadding 24 attached at one end to a screw cap 18. The attachment is effected by passing one end of the strip 24 through a slit 19 in the cap liner 15, before introducing the strip into the vial 31.

Fig. 5 shows a cork stopper 35 adhesively connected to cotton wadding 14 by a spot of glue 14'. The attachment of the wadding to the cork closure may be effected in the manner detailed for Figs. 1 and 2.

Figs. 6 to 9, inclusive, show engagement of the packing by structural means affixed to the closure. Thus, Figs. 6 and 7 show a metal wire or strip, 36 and 37 respectively, securely fastened to the cap liner 15 by passing the metal through the liner, the free end or ends of the metal being retroserrate. The cap liner is either tightly or loosely snapped into a bead formed in the cap. When the liner or the liner-and-cap combination is applied to the container, the barbs pass into and engage the packing.

Figs. 8 and 9 show a wire shaped into a helix or corkscrew, 38 and 39, and fastened to a cap liner 15, as in Fig. 8. Affixation of the packing to the closure may be accomplished by direct attachment before the packing is inserted into the container, or by twisting or turning the closure

during application thereof to the container after insertion of the packing.

The devices described herein facilitate removal of the packing, which is removed simultaneously with the closure or with the lining of the closure, or is raised in the container by the act of removing the closure, sufficiently to enable it to be withdrawn manually.

It is to be understood that the foregoing examples are merely illustrative and not limitative of the invention, which may be variously otherwise embodied within the scope of the appended claims.

We claim:

1. In packages utilizing bottles and like containers and of the character employed in the pharmaceutical trade for distributing tablets, pills, capsules and the like, said package comprising cotton or other integral wadding inserted in the top of the container so as to completely fill the space immediately above the said tablets or other contents and compacted in said space to an extent immobilizing said contents in the bottle to thereby prevent damage to and to exclude moisture from said contents, the combination with said container and said wadding, of a closure for said container, and means for attaching said wadding to the closure, whereby when said closure is released and lifted away from the container the attached wadding is withdrawn from the latter.

2. In packages utilizing bottles and like containers and of the character employed in the pharmaceutical trade for distributing tablets, pills, capsules and the like, said package comprising cotton or other integral wadding inserted in the top of the container so as to completely fill the space immediately above the said tablets or other contents and compacted in said space to an extent immobilizing said contents in the bottle to thereby prevent damage to and to exclude moisture from said contents, the combination with said container and said wadding, of a closure for said container, and mechanical means for attaching said wadding to the closure, whereby when said closure is released and lifted away from the container the attached wadding is withdrawn from the latter.

3. In packages utilizing bottles and like containers and of the character employed in the pharmaceutical trade for distributing tablets, pills, capsules and the like, said package comprising cotton or other integral wadding inserted in the top of the container so as to completely fill the space immediately above the said tablets or other contents and compacted in said space to an extent immobilizing said contents in the bottle to thereby prevent damage to and to exclude moisture from said contents, the combination with said container and said wadding, of a closure for said container, said wadding being attached to the closure by an adhesive, whereby when said closure is released and lifted away from the container the attached wadding is withdrawn from the latter.

4. In packages utilizing bottles and like containers and of the character employed in the pharmaceutical trade for distributing tablets, pills, capsules and the like, said package comprising cotton or other integral wadding inserted in the top of the container so as to completely fill the space immediately above the said tablets or other contents and compacted in said space to an extent immobilizing said contents in the bottle to thereby prevent damage to and to exclude moisture from said contents the combination with said container and said wadding, of a closure for said container, and means affixed to the closure for attaching the wadding thereto, whereby when said closure is released and lifted away from the container the attached wadding is withdrawn from the latter.

5. In packages utilizing bottles and like containers and of the character employed in the pharmaceutical trade for distributing tablets, pills, capsules and the like, said package comprising cotton or other integral wadding inserted in the top of the container so as to completely fill the space immediately above the said tablets or other contents and compacted in said space to an extent immobilizing said contents in the bottle to thereby prevent damage to and to exclude moisture from sai dcontents, the combination with said container and said wadding, of a closure for said container, and a barb connected with the closure and embedded in the wadding, whereby when said closure is released and lifted away from the container the attached wadding is withdrawn from the latter.

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